REMARKS

The Examiner is respectfully requested to review this application which has been amended after a careful consideration of the Examiner's comments in the above-identified Office Action and the references cited therein. In the above-identified Office Action, the Examiner withdrew the previous rejections and has now rejected the pending claims 24-26, 36 and 39 on the combination of the newly cited Brown et al reference in view of the Tobin and/or Schmunk references. Claim 36 has been amended to more distinctly point out applicants' invention. The language objected to by the Examiner has been canceled and the claims has been additionally amended by the addition of the language "so as not to affect the minimum predetermined wall thickness" found at page 7, line 15 of the specification.

Independent claims 24 and 36 as amended, and claims 25-26, and 39, depending therefrom are neither disclosed nor suggested by the references or any suggested combination thereof. Thus these claims are considered to be in allowable form.

Claim 36, as amended has been rejected on the basis of the newly cited Brown et al reference in view of the Schmunk reference. The Brown et al reference is directed to the uniformity of winding so as to avoid gaps between adjacent winding turns. This neither discloses nor suggests applicants' claimed concept as recited in claim 36, as amended, directed to achieving variations in the thickness of the tube that are significantly less than the minimum predetermined wall thickness so as not to affect the minimum predetermined wall thickness. While Brown et al is concerned with rather gross variations such as gaps between turns, Applicants are concerned with the control of variations in the thickness of the tube defined as the minimum predetermined wall thickness due to the use of the tapered bore and the avoidance of the taper extending too close to the outside of the arc-quenching tube, i.e. the inner layer or tube where an outer layer or tube is utilized, since the outer layer does not have the desired arc-quenching properties. Reference is made to the specification at page 7, lines 3-23 where it is explained that the criticality of such variations depends on the amount of the wall thickness that is expected to be eroded or ablated during arc-quenching and the life of the tube. Thus, claim 36, as amended, and claim 39 depending therefrom are allowable, claim 39 additionally reciting the winding of a second fiber over the first fiber.

Concerning the rejection of claims 24-26 on the basis of the newly cited Brown et al reference in view of the Tobin reference, the Tobin reference is directed to a molded tube and there is no fibrous material in the inner arc-quenching layer thereof. Thus, the Tobin reference does not suggest the use of melamine for a fuse tube fabricated via wound filamentous fiber. Further, Tobin et al is not directed to a commercial fuse tube that would have the required strength to meet the required ratings. The use of melamine for wound tubes is not taught by the prior art including the newly cited Brown et al reference. Brown et al is directed to a wound tube including the prior art approach (as in the prior cited Rinehart reference) that requires the inorganic filler aluminum trihydrate with patentability being based on the use of two different epoxy resins, the aluminum trihydrate being a less desirable arc-quenching material relative to melamine. Applicants' approach to solving the problem of providing a commercial fuse tube with wide interrupting range for currents up to 16000 amperes via the use of melamine in a fiber layer is not suggested by the Brown et al reference. Applicants' combination to solve the problem is surprising in that melamine was not thought to be usable in sufficient quantity to achieve desirable arc-quenching properties while still maintaining a high-strength tube, since melamine is known for having poor structural integrity and can compromise the strength of a composition.

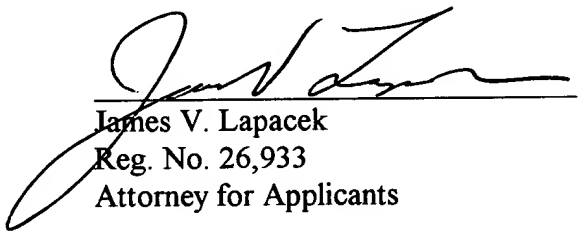
Certainly, if it were obvious to use melamine in a wound arc-quenching layer to achieve a wide-range commercial fuse tube, the combination in Brown et al would not be touted as achieving unexpected and surprising results with the less desirable inorganic filler aluminum trihydrate which also makes processing difficult. The assignees of the Browne et al reference and the prior cited Rinehart reference are in direct competition with the assignee of the instant application such that clearly these companies would have used applicants' approach if it had occurred to them, i.e. a long-felt need being established by the prior art approaches. While the use of too high a percentage of aluminum trihydrate makes processing extremely difficult due to high viscosity, the use of too high a percentage of melamine renders the overall resulting fuse tube too weak since there is not sufficient material in the form of binder and fiber (filamentous material) to provide the strength required to withstand the extreme pressures developed when interrupting 16000 amperes.

Thus, the fuse tube recited in claim 24 is neither disclosed nor suggested by the prior art, taken either singly or in any combination thereof and claim 24 is considered to be allowable.

Similarly, claims 25 and 26, depending from claim 24 are considered to be in a condition for allowance, the dependent claims more distinctly pointing out applicants' invention.

Accordingly, claims 24-26, 36 and 39, as amended, are considered to patentably distinguish over the cited reference, and these claims and this application are considered to be in a condition for allowance. Entry of the present amendment and a favorable action to that end and allowance of this application by the Examiner are respectfully requested. This amendment is believed to the claims in allowable form. If the Examiner feels that clarification of any issue or comment herein would be helpful to facilitate prosecution of this application, the Examiner is respectfully requested to contact the undersigned attorney at the number listed below for a telephonic interview or to arrange a personal interview.

Respectfully submitted,



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March 25, 2001

ATTACHMENT TO AMENDMENT C

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Amended claim 36:

36. (twice amended) A method of fabricating an arc-quenching tube via the winding of a first fiber in one or more winding passes, the method comprising winding the arc-quenching tube such that the first fiber lays flat and does not overlap in each of the one or more winding passes whereby uniformity is achieved in the thickness of the tube, the method further comprising forming a predetermined taper within the arc-quenching tube wherein the predetermined taper defines a minimum predetermined wall thickness of the tube, the uniformity being such that variations in the thickness of the tube are significantly less than the minimum predetermined wall thickness so as not to affect the minimum predetermined wall thickness [and such that the minimum predetermined wall thickness is unaffected by the winding variations].